



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0194; Project Identifier MCAI-2020-01434-R; Amendment 39-21482; AD 2021-07-05]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. (Type Certificate Previously Held by Agusta S.p.A.) (Leonardo) Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2007-26-52 which applied to certain Agusta S.p.A. (now Leonardo) Model A109C, A109E, and A109K2 helicopters. AD 2007-26-52 required inspecting for swelling, deformation, bonding separation, and for a crack on each main rotor blade (MRB) with a certain part-numbered tip cap installed, and removing the MRB from service before further flight if any of these conditions exist and exceed the prescribed limits. This AD retains all inspections for certain serial-numbered MRBs, but for MRBs with a certain tip cap installed, this AD requires dye-penetrant inspections rather than visual inspections. This AD was prompted by additional reports of in-flight loss of part of a tip cap. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD becomes effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain documents listed in this AD as of [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other documents listed in this AD as of January 7, 2002 (66 FR 60144, December 3, 2001).

The FAA must receive comments on this AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Agusta and Leonardo Helicopters service information identified in this final rule, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0194.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0194; or in person at Docket Operations between 9

a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the European Union Aviation Safety Agency (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Fred Guerin, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 2200 South 216th St. Des Moines, WA 98198; telephone (206) 231-3500; email fred.guerin@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued Emergency AD 2007-26-52 on December 20, 2007 and published it as a Final rule; request for comments on May 9, 2008, as Amendment 39-15519 (73 FR 26316). AD 2007-26-52 applied to Agusta S.p.A. (now Leonardo) Model A109C, A109E, and A109K2 helicopters with an MRB part number (P/N) 709-0103-01-all dash numbers installed. AD 2007-26-52 required, for any MRB with a serial

number (S/N) with a prefix of either “EM-” or “A5-”, except a MRB with a tip cap P/N 709-0103-29-109, within 10 hours time-in-service (TIS) and thereafter at intervals not to exceed 25 hours TIS:

- A tap inspection of the upper and lower sides of each tip cap and in the tip cap to blade bond area for bonding separation;
- A visual inspection of the upper and lower side of each blade tip cap for swelling or deformation; and
- A dye-penetrant inspection of the tip cap leading edge along the welded joint line of the upper and lower tip cap skin shells for a crack.

For any MRB with a tip cap P/N 709-0103-29-109 installed, the AD required visually inspecting for a crack on the leading edge at the welded bead (joint line of shells) using a 10x or higher power magnifying glass, and if there is damage other than a crack, inspecting the area using a dye-penetrant inspection method, within the following compliance times:

- For a tip cap P/N 709-0103-29-109 with 600 or more hours TIS, inspect within the next 5 hours TIS or 30 days, whichever occurs first, and thereafter at intervals not to exceed 50 hours TIS; or
- For a tip cap P/N 709-0103-29-109 with less than 600 hours TIS, inspect before reaching 600 hours TIS, and thereafter, at intervals not to exceed 50 hours TIS.

AD 2007-26-52 also required replacing the MRB if swelling, deformation, a crack, or bonding separation that exceeds the prescribed limits is found in an MRB with an affected prefix, except an MRB with a tip cap P/N 709-0103-29-109. The MRB must be replaced with an airworthy MRB before further flight. If a crack is found in a MRB with tip cap P/N 709-0103-29-109, then AD 2007-26-52 required replacing the MRB before further flight. The actions were required to be accomplished in accordance with the manufacturer’s service information.

AD 2007-26-52 was prompted by EASA AD 2007-0306-E, dated December 14, 2007 (EASA AD 2007-0306-E). EASA, which is the Technical Agent for the Member States of the European Union, notified the FAA that an unsafe condition may exist on Agusta Model A109C, A109E, and A109K2 helicopters. EASA advises that an incident occurred in which a Model A109E helicopter lost part of the tip of the MRB due to fracture of the welded bead (joint line of shells). The manufacturer advised that the investigation relating to this tip cap failure was still ongoing.

Actions Since AD 2007-26-52 was Issued

Since the FAA issued AD 2007-26-52, EASA issued AD 2020-0230, dated October 22, 2020 (EASA AD 2020-0230), which supersedes EASA AD 2007-0306-E, to correct an unsafe condition for Leonardo S.p.a. Helicopters, formerly Finmeccanica S.p.A., AgustaWestland S.p.A., Agusta S.p.A., Model A109E, A109K2, and A109C helicopters, all serial numbers. EASA advises that recent occurrences of affected parts detachment have been reported. EASA advises that the visual inspection for MRBs with tip cap P/N 709-0103-29-109 installed is no longer acceptable to detect part cracking and that this condition, if not detected and corrected, could lead to further affected parts detachments, possibly resulting in reduced control of the helicopter.

Accordingly, EASA AD 2020-0230 replaces the requirements of EASA AD 2007-0306-E for MRBs with a tip cap P/N 709-0103-29-109 installed, by changing the visual inspections of affected parts to dye-penetrant inspections and requires, depending on findings, replacement.

FAA's Determination

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA about the unsafe condition described in its AD. The FAA is issuing this AD after evaluating all known relevant information and determining that the unsafe condition described previously is likely to exist or develop on other helicopters of the same type designs.

Related Service Information under 1 CFR Part 51

The FAA previously reviewed the following Agusta Alert Bollettino Tecnico (BT), each Revision B and each dated December 19, 2000:

- No. 109-106 which applies to Model A109C helicopters;
- No. 109EP-1 which applies to Model A109E helicopters; and
- No. 109K-22 which applies to Model A109K2 helicopters.

These BTs specify procedures for inspecting the MRB tip cap for bonding separation and a crack; a tap inspection of the tip cap for bonding separation in the blade bond; and a dye-penetrant inspection of the tip cap leading edge along the welded joint line of the upper and lower tip cap skin shells for a crack.

The FAA reviewed the following Leonardo Helicopters Alert Service Bulletins (ASBs), each Revision A and each dated October 19, 2020:

- No. 109-125 which applies to Model A109C helicopters;
- No. 109EP-085 which applies to Model A109E helicopters; and
- No. 109K-048 which applies to Model A109K2 helicopters.

These ASBs specify dye-penetrant inspecting the tip cap P/N 709-0103-29-109 for cracks on the tip cap leading edge at the welded bead (joint line of shells) and removes the magnifying glass inspection that was specified in the original ASBs.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

AD Requirements

This AD continues to require, for an MRB with a S/N that has a prefix of either “EM-” or “A5-”, except an MRB with a tip cap P/N 709-0103-29-109 installed, within 10 hours TIS after the effective date of this AD and thereafter at intervals not to exceed 25 hours TIS, tap inspecting each tip cap for bonding separation in specified areas; tap inspecting for bonding separation in the tip cap to blade bond area; visually inspecting the upper and lower sides of each blade tip cap for swelling or deformation; and dye-penetrant inspecting the tip cap leading edge along the welded joint line of the upper and lower tip cap skin shells for a crack. If there is any swelling, deformation, or crack, or

bonding separation that exceeds allowable limits, removing the blade from service is required before further flight; if there is no swelling, deformation or crack, or if bonding separation does not exceed allowable limits, continuing the inspections is required.

For an MRB with a tip cap P/N 709-0103-29-109 installed, this AD now requires, for each tip cap with less than 600 hours TIS, before reaching 600 hours TIS, and thereafter, at intervals not to exceed 50 hours TIS, or for each tip cap with 600 or more hours TIS, within the next 5 hours TIS or 30 days after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 50 hours TIS, dye-penetrant inspecting the welded bead on the tip cap leading edge (joint line between the two metal shells) for a crack and removing the tip cap from service if there is a crack.

This AD also prohibits installing an MRB with tip cap P/N 709-0103-29-109 on any helicopter unless it has been inspected in accordance with the inspection requirements of this AD.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) (5 U.S.C. 551 *et seq.*) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies foregoing notice and comment prior to adoption of this rule because inspections for certain MRBs must be accomplished within 5 or 10 hours TIS after the effective date of this AD, depending on the MRB, and

corrective action is required before further flight. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to 5 U.S.C. 553(b)(3)(B). In addition, the FAA finds that good cause exists pursuant to 5 U.S.C. 553(d) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forego notice and comment.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0194; Project Identifier MCAI-2020-01434-R” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked

submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Fred Guerin, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 2200 South 216th St. Des Moines, WA 98198; telephone (206) 231-3500; email fred.guerin@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to 5 U.S.C. 553 to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without prior notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 72 helicopters of U.S. Registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD.

Each tap inspection will take about 3 work-hours and there are no parts costs for an estimated cost of about \$255 per helicopter per inspection cycle.

Each visual inspection will take about 1 work-hour and there are no parts cost for an estimated cost of about \$85 per helicopter per inspection cycle.

Each dye-penetrant inspection will take about 3 work-hours and parts will cost about \$100 for an estimated cost of about \$355 per helicopter per inspection cycle.

Replacing a blade, if required, will take about 2 work-hours and parts will cost about \$98,435 per blade, for an estimated cost of about \$98,605 per replacement.

Replacing a tip cap, if required, will take about 30 work-hours and parts will cost about \$3,034 per tip cap, for an estimated cost of about \$5,584 per replacement.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866, and
- (2) Will not affect intrastate aviation in Alaska.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2007-26-52, Amendment 39-15519 (73 FR 26316, May 9, 2008); and

b. Adding the following new AD:

2021-07-05 Leonardo S.p.a. (Type Certificate Previously Held by Agusta S.p.A.)

(Leonardo): Amendment 39-21482; Docket No. FAA-2021-0194; Project Identifier MCAI-2020-01434-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2007-26-52, Amendment 39-15519 (73 FR 26316, May 9, 2008).

(c) Applicability

This AD applies to Leonardo Model A109C, A109E, and A109K2 helicopters, certificated in any category, with a main rotor blade (MRB) part number (P/N) 709-0103-01-all dash numbers installed.

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6210, Main Rotor Blades.

(e) Unsafe Condition

This AD was prompted by reports of the in-flight loss of tip caps. The FAA is issuing this AD to prevent loss of a tip cap from an MRB. The unsafe condition, if not addressed, could result in an increase in MRB vibration and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For an MRB with a serial number that has a prefix of either “EM-” or “A5-”, except an MRB with a tip cap P/N 709-0103-29-109 installed, within 10 hours time-in-service (TIS) after the effective date of this AD, unless accomplished previously, and thereafter at intervals not to exceed 25 hours TIS:

(i) Tap inspect the upper and lower sides of each tip cap for bonding separation between the metal shells and the honeycomb core using a steel hammer P/N 109-3101-58-1 or a coin (quarter) in the area indicated as honeycomb core on Figure 1 of Agusta Alert Bollettino Tecnico (BT) No. 109-106, BT No. 109K-22, or BT No. 109EP-1, each Revision B and each dated December 19, 2000 (BT No. 109-106, BT No. 109K-22, or BT No. 109EP-1), as applicable to your helicopter model. Also, tap inspect for bonding separation in the tip cap to blade bond area (no bonding voids are permitted in this area).

(ii) Visually inspect the upper and lower sides of each blade tip cap for swelling or deformation.

(iii) Dye-penetrant inspect the tip cap leading edge along the welded joint line of the upper and lower tip cap skin shells for a crack in accordance with the Compliance Instructions, steps 3. through 3.2.6., of BT No. 109-106, BT No. 109K-22, or BT No. 109EP-1, as applicable to your helicopter model.

(iv) If there is any swelling, deformation, or crack; or bonding separation that exceeds allowable limits, remove the blade from service before further flight.

(v) If there is no swelling, deformation or crack; or if bonding separation does not exceed allowable limits, continue to perform the inspections required by this AD.

(2) For an MRB with a tip cap P/N 709-0103-29-109 installed, perform the following at the specified intervals:

(i) For each tip cap with less than 600 hours TIS, before reaching 600 hours TIS, and thereafter, at intervals not to exceed 50 hours TIS or

(ii) For each tip cap with 600 or more hours TIS, within the next 5 hours TIS or 30 days after the effective date of this AD, whichever occurs first, and thereafter at intervals not to exceed 50 hours TIS.

(A) Dye-penetrant inspect the welded bead on the tip cap leading edge (joint line between the two metal shells) for a crack in accordance with the Accomplishment Instructions, steps 3.1 through 3.6, of Leonardo Helicopters Alert Service Bulletin (ASB) No. 109-125, ASB No. 109EP-085, or ASB No. 109K-048, each at Revision A and each dated October 19, 2020, as applicable your helicopter model.

(B) If there is a crack, remove the tip cap from service before further flight.

(3) As of the effective date of this AD, do not install any MRB with tip cap P/N 709-0103-29-109 on any helicopter unless it has been inspected in accordance with the inspection requirements of this AD.

(h) Special Flight Permits

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the helicopter to a location where the requirements of this AD can be accomplished provided that:

- (1) No passengers are onboard;
- (2) The time to fly to the location does not exceed 10 hours TIS; and
- (3) The airspeed does not exceed 70 knots indicated air speed (KIAS).

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person

identified in paragraph (j)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Fred Guerin, Aerospace Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 2200 South 216th St. Des Moines, WA 98198; telephone (206) 231-3500; email fred.guerin@faa.gov.

(2) The subject of this AD is addressed in European Union Aviation Safety Agency (EASA) AD 2020-0230, dated October 22, 2020. You may view the EASA AD on the Internet at <https://www.regulations.gov> in Docket No. FAA-2021-0194.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Leonardo Helicopters Alert Service Bulletin No. 109-125, Revision A, dated October 19, 2020.

(ii) Leonardo Helicopters Alert Service Bulletin No. 109EP-085, Revision A, dated October 19, 2020.

(iii) Leonardo Helicopters Alert Service Bulletin No. 109K-048, Revision A, dated October 19, 2020.

(4) The following service information was approved for IBR on January 7, 2002 (66 FR 60144, December 3, 2001).

(i) Agusta Alert Bollettino Tecnico No. 109-106, Revision B, dated December 19, 2000.

(ii) Agusta Alert Bollettino Tecnico No. 109EP-1, Revision B, dated December 19, 2000.

(iii) Agusta Alert Bollettino Tecnico No. 109K-22, Revision B, dated December 9, 2000.

(5) For Leonardo Helicopters and Agusta service information identified in this AD, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G. Agusta 520, 21017 C. Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>.

(6) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email: fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on March 19, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-06200 Filed: 3/22/2021 4:15 pm; Publication Date: 3/24/2021]